

CLAIMS

What is claimed is:

1. An apparatus comprising:
 - a replaceable component;
 - an RFID tag attached to the replaceable component, the RFID tag storing a value representing a cumulative duration of use of the replaceable component;
 - means for using a wireless link within the apparatus to read the value from the RFID tag; and
 - means for outputting an indication of the value to a user of the apparatus.
2. An apparatus as recited in claim 1, further comprising:
 - means for tracking use of the replaceable component in the apparatus; and
 - means for using the wireless link to update the value in the RFID tag based on the use of the replaceable component in the apparatus.
3. An apparatus as recited in claim 1, wherein the apparatus is a light source unit for use in an endoscopic imaging system.
4. An apparatus as recited in claim 3, wherein the replaceable component comprises a light bulb to generate light for transmission through an endoscope into an object to be viewed.
5. An apparatus as recited in claim 1, wherein the replaceable component is a light bulb to generate light for transmission through an endoscope into an object to be viewed.

6. An apparatus as recited in claim 1, wherein the apparatus further comprises means for causing the RFID tag to store data for identifying the replaceable component.
7. An apparatus as recited in claim 6, wherein the data for identifying the replaceable component comprises authentication data for the replaceable component, the apparatus further comprising means for reading the authentication data from the RFID tag and means for selectively enabling or disabling use of the replaceable component in the apparatus based on the authentication data.
8. An apparatus as recited in claim 1, wherein the apparatus further comprises means for causing the RFID tag to store data for identifying the apparatus.
9. An apparatus as recited in claim 1, wherein the replaceable component is removable from the apparatus and is usable as a component of another apparatus, and wherein the RFID tag further stores data identifying each apparatus in which the replaceable component is used as a component.
10. An apparatus as recited in claim 1, further comprising means for causing the RFID tag to store performance data relating to a component of the apparatus other than the replaceable component.
11. A light source unit for use in an endoscopic imaging system, the light source unit comprising:
 - a light source;
 - a light source housing containing the light source;

an optical transmission medium to transfer light generated by the light source to an external flexible light carrier;

an RFID tag fixedly attached to the light source housing;

an RF transceiver;

an antenna coupled to the RF transceiver and mounted adjacent to the RFID tag so as to permit wireless communication between the RFID tag and the transceiver;

a controller to control the RF transceiver to read a value stored in the RFID tag using said wireless communication, the controller to track information of the light source in the light source unit and to control the transceiver to update the value in the RFID tag using said wireless communication; and

an output device to output an indication of the value in the RFID tag as an indication of the cumulative duration of use of the light source.

12. A light source as recited in claim 11, wherein the antenna comprises a coil.

13. A light source as recited in claim 11, wherein the RFID tag further stores data for identifying the light source.

14. A light source as recited in claim 13, wherein the data for identifying the light source comprises authentication data for the light source, the light source unit further comprising means for reading the authentication data from the RFID tag and means for selectively enabling or disabling use of the light source in the light source unit based on the authentication data.

15. A light source as recited in claim 11, wherein the light source is removably installed in the light source unit and is usable in any of a plurality of light source units, and wherein the RFID tag further stores data identifying each light source unit in which the light source is used.

16. A light source as recited in claim 11, wherein the controller is configured to cause the RF transceiver to cause the RFID tag to store data for identifying the light source unit.

17. A light source as recited in claim 11, wherein the controller is configured to cause the RF transceiver to cause the RFID tag to store performance data relating to a component of the light source unit other than the light source.

18. A light source as recited in claim 11, further comprising a resonance circuit coupled to an output of the RF transceiver, the resonance circuit including the antenna.

19. A light source as recited in claim 11, wherein the value stored in the RFID tag represents a cumulative duration of use of the light source, wherein the controller is further to track use of the light source within the light source unit and to update the value stored in the RFID tag based on said use of the light source within the light source unit.

20. A light source assembly for use in a light source unit in an endoscopic imaging system, the light source assembly comprising:

a housing;

a light source, mounted within the housing, to generate light to be transmitted through an endoscope; and

an RFID tag attached to the housing, to store data relating to operation of the light source unit.

21. A light source as recited in claim 20, wherein the RFID tag stores a value representing a cumulative duration of use of the light source.

22. A light source as recited in claim 21, wherein the RFID tag further stores data for identifying the light source.

23. A light source as recited in claim 21, wherein the RFID tag further stores authentication data for use by the light source unit, when the light source is installed in the light source unit, to selectively enable or disable operation of the light source.

24. A light source as recited in claim 20, wherein the RFID tag stores data for identifying the light source unit.

25. A light source as recited in claim 20, wherein the RFID tag stores performance data relating to a component of the endoscopic imaging system other than the light source.

26. A method comprising:

using a wireless link within a device to read a value stored in a memory attached to a removable component within the device, the value representing a cumulative duration of use of the removable component;

outputting an indication of the value to a user of the device;

tracking use of the removable component in the device; and
using the wireless link within the device to update the value in the memory,
based on use of the removable component in the device.

27. A method as recited in claim 26, wherein the memory is included in an RFID tag
fixedly attached to the removable component.

28. A method as recited in claim 26, wherein the device is a light source unit for use in
an endoscopic imaging system.

29. A method as recited in claim 28, wherein the removable component comprises a
light bulb assembly to generate light for transmission into an object to be viewed.

30. A method as recited in claim 26, wherein the removable component comprises a
light bulb to generate light for transmission into an object to be viewed using an
endoscope.

31. A method as recited in claim 26, further comprising reading from the memory, data
for identifying the removable component.

32. A method as recited in claim 26, further comprising:
reading authentication data from the memory; and
selectively enabling or disabling use of the removable component in the device
based on the authentication data.

33. A method as recited in claim 26, further comprising storing in the memory, data for identifying the device, to indicate that the removable component has been used in the device.

34. A method as recited in claim 26, further comprising storing in the memory, performance data relating to a component of the device other than the removable component.

35. A method of tracking use of a light source in a light source unit for use in an endoscopic imaging system, the method comprising:

using a wireless link within the light source unit to read a value stored in a memory attached to the light source, the value representing a cumulative duration of use of the light source; and

outputting an indication of the value to a user of the light source unit.

36. A method as recited in claim 35, further comprising:

tracking use of the light source in the light source unit; and

using the wireless link to update the value in the memory based on use of the light source in the light source unit.

37. A method as recited in claim 35, wherein the memory is included in an RFID tag fixedly attached to a structure that contains the light source.

38. A method as recited in claim 35, further comprising reading from the memory, data for identifying the light source.

39. A method as recited in claim 35, the method further comprising:

reading authentication data from the memory; and

selectively enabling or disabling use of the light source in the light source unit based on the authentication data.

40. A method as recited in claim 35, further comprising storing in the memory data for identifying the light source unit, to indicate that the light source has been used in the light source unit.

41. A method as recited in claim 35, further comprising storing in the memory, performance data relating to a component of the light source unit other than the light source.